

# Product Environmental Profile

**Variable speed drive, Altivar Machine ATV320, 15 kW, 380...500 V, 3 phases, compact**

**Altivar Machine ATV320**

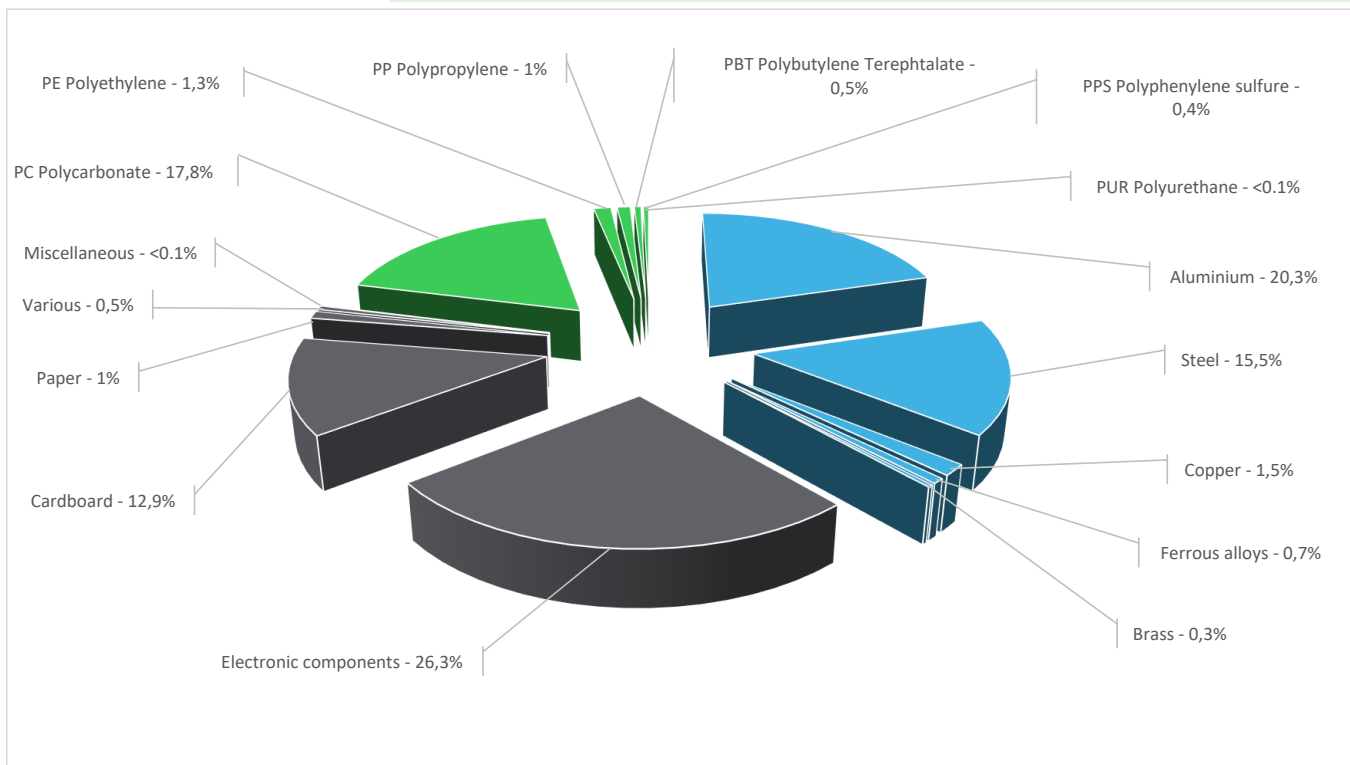


## General information

Reference product	Variable speed drive, Altivar Machine ATV320, 15 kW, 380...500 V, 3 phases, compact - ATV320D15N4C
Description of the product	The main function of the Altivar Machine product range is the speed control and variation of a synchronous, asynchronous or reluctance electric motor for fluid management and industrial applications.
Description of the range	This range consists of products Altivar Machine ATV320, a variable speed drive designed for Original Equipment Manufacturers (OEMs) that meets simple and advanced application requirements for 3 Phases synchronous and asynchronous motors from 11 to 15 kW (15 to 20 HP)  The environmental impacts of this reference product are representative of the impacts of the other products of the range which are developed with a similar technology.
Functional unit	To adapt the speed and torque of synchronous, asynchronous or reluctance motor to the machine's operating point for 15 kW for heavy duty electric motors for fluid management and industrial applications in IP20/UL type 1 conditions, at 380V to 500V rated 3-phases voltage supply. Calculation of the environmental impacts is based on 10 years of product service lifetime. The usage profile taken into account is 80% uptime in use phase at 75% loading rate and 20% uptime in stand by phase.

## Constituent materials

Reference product mass	7965,1 g including the product, its packaging and additional elements and accessories
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Plastics	21,00%
Metals	38,30%
Others	40,70%

## Substance assessment

Details of ROHS and REACH substances information are available on the Schneider-Electric Green Premium website <https://www.se.com/ww/en/work/support/green-premium/>

## Additional environmental information

End Of Life	Recyclability potential:	40%	Recyclability rate has been calculated based on REEECY'LAB tool developed by Ecosystem, for components/materials not covered by the tool, data from the "ECO'DEEE recyclability and recoverability calculation method" was taken. If no data was found a conservative assumption was used (0% recyclability).
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**Environmental impacts**

Reference service life time	10 years
Product category	Other equipments - Active product
Installation elements	The disposal of the packaging materials are accounted for during the installation phase (including transport to disposal).
Use scenario	The product is in active phase 80% of the time at 75% loading rate with a power use of 301 W and in stand-by phase 20% of the time with a power use of 11 W, for 10 years. Drive efficiency according to IEC/EN 61800-9-2 (supersedes EN 50598-2).
Technological representativeness	The Modules of Technologies such as material production, manufacturing process and transport technology used in this PEP analysis (LCA EIME in this case) are Similar and representative of the actual type of technologies used to make the product
Geographical representativeness	Europe
Energy model used	[A1 - A3]
	Electricity Mix; Production mix; Low voltage; ID
	[A5]
	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27
	[B6]
	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27
	[C1 - C4]
	Electricity Mix; AC; consumption mix, at consumer; < 1kV; EU-27

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

Mandatory Indicators		Variable speed drive, Altivar Machine ATV320, 15 kW, 380...500 V, 3 phases, compact - ATV320D15N4C						
Impact indicators	Unit	Total	Manufacturing	Distribution	Installation	Use	End of Life	Loads and Benefits
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]
Contribution to climate change	kg CO2 eq	1,30E+04	1,15E+02	0*	1,94E+00	1,28E+04	1,16E+01	-8,66E+00
Contribution to climate change-fossil	kg CO2 eq	1,30E+04	1,14E+02	0*	1,85E+00	1,28E+04	1,14E+01	-8,57E+00
Contribution to climate change-biogenic	kg CO2 eq	1,38E+00	1,08E+00	0*	8,61E-02	0*	2,20E-01	-8,50E-02
Contribution to climate change-land use and land use change	kg CO2 eq	2,74E-07	1,95E-07	0*	5,52E-10	0*	7,87E-08	0,00E+00
Contribution to ozone depletion	kg CFC-11 eq	2,36E-03	1,67E-05	0*	0*	2,34E-03	3,62E-07	-1,06E-06
Contribution to acidification	mol H+ eq	1,09E+02	9,84E-01	0*	0*	1,08E+02	1,24E-01	-4,97E-02
Contribution to eutrophication, freshwater	kg (PO4) <sup>3-</sup> eq	2,13E-03	2,68E-04	3,90E-07	1,40E-05	1,60E-03	2,44E-04	-3,05E-05
Contribution to eutrophication marine	kg N eq	9,05E+00	1,36E-01	3,15E-03	2,04E-03	8,83E+00	8,14E-02	-6,29E-03
Contribution to eutrophication, terrestrial	mol N eq	9,77E+01	1,47E+00	3,45E-02	1,54E-02	9,62E+01	6,55E-02	-6,51E-02
Contribution to photochemical ozone formation - human health	kg COVNM eq	2,99E+01	4,88E-01	8,72E-03	4,11E-03	2,93E+01	2,51E-02	-2,10E-02
Contribution to resource use, minerals and metals	kg Sb eq	1,50E-02	1,47E-02	0*	0*	2,99E-04	4,94E-06	-2,04E-03
Contribution to resource use, fossils	MJ	2,39E+05	2,14E+03	0*	0*	2,36E+05	2,87E+02	-1,68E+02
Contribution to water use	m3 eq	2,87E+03	4,70E+01	0*	8,28E-01	1,41E+03	1,41E+03	-4,02E+00

Additional indicators for the French regulation are available as well

Inventory flows Indicators		Variable speed drive, Altivar Machine ATV320, 15 kW, 380...500 V, 3 phases, compact - ATV320D15N4C							
Inventory flows	Unit	Total	Manufact.	Distribution	Installation	Use	End of Life	Loads and Benefits	
			[A1 - A3]	[A4]	[A5]	[B1 - B7]	[C1 - C4]	[D]	
Contribution to use of renewable primary energy excluding renewable primary energy used as raw material	MJ	1,83E+04	3,54E+01	0*	0*	1,82E+04	6,26E+00	8,76E+00	
Contribution to use of renewable primary energy resources used as raw material	MJ	8,00E+00	8,00E+00	0*	0*	0*	0*	-1,66E+01	
Contribution to total use of renewable primary energy resources	MJ	1,83E+04	4,34E+01	0*	0*	1,82E+04	6,26E+00	-7,89E+00	
Contribution to use of non renewable primary energy excluding non renewable primary energy used as raw material	MJ	2,39E+05	2,06E+03	0*	0*	2,36E+05	2,87E+02	-1,68E+02	
Contribution to use of non renewable primary energy resources used as raw material	MJ	8,23E+01	8,23E+01	0*	0*	0*	0*	-4,70E-03	
Contribution to total use of non-renewable primary energy resources	MJ	2,39E+05	2,14E+03	0*	0*	2,36E+05	2,87E+02	-1,68E+02	
Contribution to use of secondary material	kg	7,30E-01	7,30E-01	0*	0*	0*	0*	0,00E+00	
Contribution to use of renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to use of non renewable secondary fuels	MJ	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to net use of freshwater	m³	7,09E+01	1,13E+00	0*	1,93E-02	3,28E+01	3,69E+01	-9,37E-02	
Contribution to hazardous waste disposed	kg	1,74E+02	1,66E+02	0*	2,29E-02	0*	7,66E+00	-1,61E+02	
Contribution to non hazardous waste disposed	kg	4,71E+04	7,94E+01	0*	6,30E+00	4,70E+04	0*	-2,93E+01	
Contribution to radioactive waste disposed	kg	3,84E+01	5,36E-02	0*	0*	3,83E+01	0*	-3,59E-03	
Contribution to components for reuse	kg	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to materials for recycling	kg	3,71E+00	1,14E-03	0*	1,07E+00	0*	2,64E+00	0,00E+00	
Contribution to materials for energy recovery	kg	7,03E-08	7,03E-08	0*	0*	0*	0*	0,00E+00	
Contribution to exported energy	MJ	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to biogenic carbon content of the product	kg de C	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	
Contribution to biogenic carbon content of the associated packaging	kg de C	0,00E+00	0*	0*	0*	0*	0*	0,00E+00	

\* represents less than 0.01% of the total life cycle of the reference flow

Life cycle assessment performed with EIME version v5.9.4, database version 2022-01 (EF 3.0 method is applied) in compliance with ISO14044.

Detailed results, including all the optional indicators mentioned in PCRed4, and the split of the Use Phase (B1 to B7), are available in the LCA report and on demand in a digital format - Country Customer Care Center - <http://www.schneider-electric.com/contact>

According to this environmental analysis, proportionality rules may be used to evaluate the impacts of other products of this range, ratios to apply can be provided upon request

Please note that the values given above are only valid within the context specified and cannot be used directly to draw up the environmental assessment of an installation.

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Date of issue	2024/01/11	Information and reference documents	<a href="http://www.pep-ecopassport.org">www.pep-ecopassport.org</a>
		Validity period	5 years
Independent verification of the declaration and data, in compliance with ISO 14025 : 2010			
Internal	External	X	
The PCR review was conducted by a panel of experts chaired by Julie ORGELET (DDemain)			
PEP are compliant with XP C08-100-1 :2016 or EN 50693:2019			
The elements of the present PEP cannot be compared with elements from another program.			
Document in compliance with ISO 14025 : 2010 « Environmental labels and declarations. Type III environmental declarations »			



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